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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,188	07/06/2006	Franco Stocchiero	42840104PUS1	9488

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EXAMINER

MEKHLIN, ELI S

ART UNIT	PAPER NUMBER
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1793

NOTIFICATION DATE	DELIVERY MODE
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05/20/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/565,188	Applicant(s) STOCCHIERO, FRANCO	
	Examiner ELI MEKHLIN	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/20/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the first office action on the merits.
2. The preliminary amendment filed January 20, 2006, has been entered. Claims 13-33 are pending before the Office for review.

Claim Objections

3. Claim 33 is objected to because of the following informalities: Claim 33, Line 2 contains a grammatical error. The claim should read "not less than" not "not less man." Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 13-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Specifically, although references to figures are allowed in the claims, the claims in this instance contain multiple, repeating references to different embodiments in the figures, which makes the claims unclear. The use of such claim structure is improper and renders the claim indefinite because the intended scope of the claim is not clear. The claim does not apprise one of ordinary skill in the art of its scope and, therefore, does not serve the notice function required by 35 U.S.C. 112, second paragraph, by failing to provide clear warning to others as to what constitutes infringement of the patent. *Solomon v. Kimberly-Clark Corp.*, 216 F.3d 1372 (Fed. Cir. 2000). For

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purposes of examination, Examiner will interpret the claim to generically require the claimed structural features of the cover and electric accumulator.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

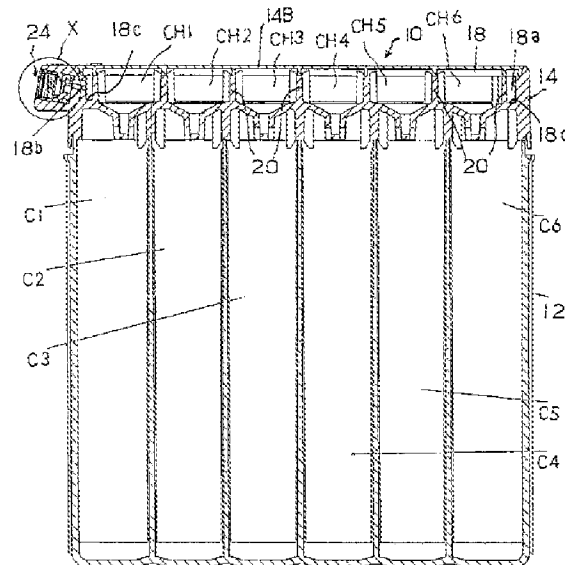
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 13-14, 16-17, 19-30 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over MITTAL et al. (U.S. Publication No. 4,348,466) in view of ELCHEW et al. (U.S. Patent No. 4,348,466).

10. With respect to claim 13, MITTAL teaches a battery with a housing (electric accumulator) comprising a plurality of cells. Paragraph 8. The battery has a cover that has a vent line which has an inlet in communication with the cells and an exit end in communication with the outside. Paragraph 8. The vent line (discharge channel) has a vent cap (valve device) which is designed to prevent the leaking of acid (electrolyte) present in one or more of the battery cells. Paragraph 43. The vent cap (valve device)

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is used to dispose to the outside gases that develop inside the accumulator. Paragraph 51. The venting is not automated, i.e. it occurs in response to pressure buildup (when the pressure in said one or more cells exceeds a predetermined value). Paragraph 51. The vent cap (valve device) communicates with the cells through a vent line and the vent line has a vent chamber, which is in flow communication with the cells. Paragraph 44. The vent chambers, owing to their position in the vent line and fluid communication with the cells, have an inlet mouth communication with one or more cells and an outlet mouth communicating with the inlet. Paragraph 44. The electric accumulator is of the type with free electrolyte. Paragraph 2. Additionally, MITTAL teaches that the cover is sealed to an upper-end of the housing, meaning it is adapted to be integral with the container. Paragraph 8. MITTAL is silent as to whether the inlet mouth communicates through one or more of the cells through a communication chamber.

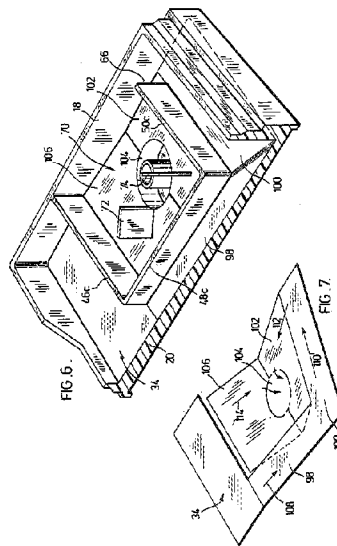


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11. However, ELEHEW, which deals with anti-spill devices for electrolyte batteries, teaches a chamber configuration (accumulation chamber) that provides for an anti-spill arrangement such that the chamber has an inlet communication (inlet mouth) with a battery cell and an outlet in communication with a vent apparatus to the atmosphere.

Abstract. Therefore, it would have been obvious to a person having ordinary skill in the art at the time of invention to modify the battery configuration taught by MITTAL with the anti-spill configuration taught by ELEHEW because doing so allows for a battery that can be vented for safety with a back-up anti-spill arrangement.

12. With respect to claims 14 and 23, ELEHEW teaches that the chamber configuration has downward sloping surfaces which lead to the opening of the chamber for return of the electrolyte via openings. Col. 5, Lines 65-68, Col. 6, Lines 1-5, Figures 6 and 7.



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13. With respect to claims 15 and 24, ELEHEW teaches that the accumulation chamber, which is part of the anti-spill configuration, contains upper tilted planes that define second tanks adapted to hold electrolytes. Figure 5 (illustrated in paragraph 30) and Col. 5, Lines 39-56. Specifically, the arrows in Figure 5 indicate the electrolyte flow and arrow 92 indicates when the electrolyte enters the second tank, which has upper tilted planes. Figure 5.

14. With respect to claims 16 and 25, MITTAL teaches that a portion of the vent line (discharge channel) is tilted to slope downward. Paragraph 43. The vent line is in communication with the spaces above the cells, such that any electrolyte in the vent line would be eased back toward the cells. Paragraphs 43-44.

15. With respect to claims 17 and 26, MITTAL teaches that the vent line contains vent chambers, which have tilted planes that define first tanks that communication with one another through the vent line. Paragraph 44.

16. With respect to claim 19 and 20, MITTAL teaches that the vent cap (valve device) is an overpressure valve, i.e. the venting occurs in response to pressure build up. Paragraphs 49, 54-55. For example, when the battery is inverted, the over pressure valve is greater than the pressure exerted by electrolyte on the battery. Paragraph 54-55.

17. With respect to claim 21, MITTAL teaches that the cover can be used in an electric accumulator of the type with free electrolyte. Paragraphs 2 and 8. The electric accumulator contains a housing that has a plurality of cells. Paragraph 8. A person having skill in the art at the time of invention would understand that in the accumulator

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taught by MITTAL, where the free electrolyte is acid (Paragraph 43), the cells are stacked plates. MITTAL also teaches that the electric accumulator uses the cover described in Claim 1, as taught by MITTAL and ELCHEW.

18. With respect to claim 22, MITTAL teaches a free electrolyte electric accumulator. Paragraphs 2 and 8. The accumulator has a housing (container) and a cover adapted to close the housing (container.) Paragraph 8. The housing contains a plurality of cells adapted to contain the electrolyte. Paragraphs 2 and 8. Because the free electrolyte is acid (Paragraph 43), a person having ordinary skill in the art would appreciate that the cells are also adapted to house the plate groups of the accumulator. The accumulator has a cover that has a vent line which has an inlet in communication with the cells and an exit end in communication with the outside. Paragraph 8. The vent line has a vent cap (valve device) which is designed to prevent the leaking of electrolyte present in one or more of the battery cells. Paragraph 43. The vent cap (valve device) is used to dispose to the outside gases that develop inside the accumulator. Paragraph 51. The venting is not automated, i.e. it occurs in response to pressure buildup (when the pressure in said one or more cells exceeds a predetermined value). Paragraph 51. The vent cap (valve device) communicates with the cells through a vent line and the vent line has a vent chamber, which is in flow communication with the cells. Paragraph 44. The vent chambers, owing to their position in the vent line and fluid communication with the cells, have an inlet mouth communication with one or more cells and an outlet mouth communicating with the inlet. Paragraph 44. ELCHEW, which deals with anti-spill devices for electrolyte batteries, teaches a chamber configuration (accumulation

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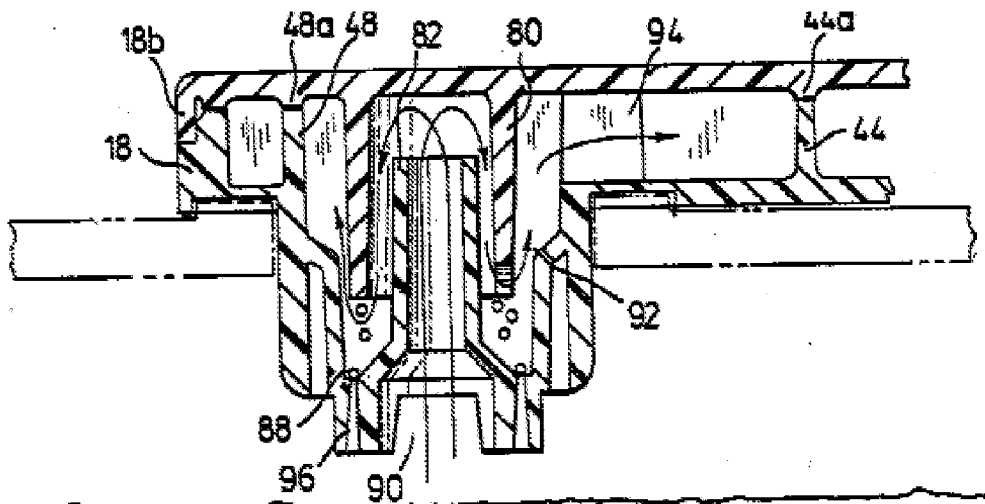
chamber) that provides for an anti-spill arrangement such that the chamber has an inlet communication (inlet mouth) with a battery cell and an outlet in communication with a vent apparatus to the atmosphere. Abstract.

19. With respect to claim 27, MITTAL teaches that the battery cover is provided with a vent line (discharge channel), meaning that at least a portion of the discharge channel is realized in the cover of the accumulator. Paragraph 8.

20. With respect to claim 28, ELEHEW teaches that at least one part of the accumulation chambers is realized in the cover of the accumulator. Col. 3, Lines 15-24. Specifically, ELEHEW teaches that the anti-spill mechanism, of which the accumulation chamber is a part, is located in the cover of the accumulator. Col. 3. Lines 15-24.

21. With respect to claim 29, MITTAL teaches that the vent line (discharge channel) is in flow communication with the spaces above the cells, which are located in the accumulator. Paragraph 8. Because the vent line is in flow communication with the space above the cells, which is located in the container, a portion of the vent line, even if it is just the vent line opening into the space above the cell, must be realized in the container.

22. With respect to claim 30, ELEHEW teaches that a portion of the accumulation chambers is also realized in the container of the accumulator. Figure 5. Specifically, in Figure 5, ELEHEW depicts the accumulation chamber as extending below the cover line and being in communication with the cell compartments. Figure 5.



23. With respect to claim 32 and 33, MITTAL teaches that the vent cap (valve device) is an overpressure valve, i.e. the venting occurs in response to pressure build up. Paragraphs 49, 54-55. For example, when the battery is inverted, the over pressure valve is greater than the pressure exerted by electrolyte on the battery. Paragraph 54-55.

24. Claims 18 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over MITTAL (U.S. Publication No. 2003/0059669), as modified by ELEHEW, as applied to CLAIMS, and in further view of JUTTE (U.S. Patent No. 4,207,387).

25. With respect to claims 19 and 31, MITTAL and ELEHEW, as combined above, are silent as to whether each of the cells is provided with a valve device.

26. However, JUTTE, which deals with remotely vented batteries, teaches that equipping each cell in an electric accumulator with a vent aperture (valve device) provides for a mechanism of remote venting, such that the possibility of ignition or chemical of the contents of the accumulator with outside components is reduced. Col. 1, Lines 20-34, Col. 2, Lines 23-27. Therefore, it would have been obvious to a person

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having ordinary skill in the art at the time of invention to include a vent aperture on each cell because JUTTE teaches that doing so allows for remove venting, which increases the safety of the electric accumulator when it is being used.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELI MEKHLIN whose telephone number is (571)270-7597. The examiner can normally be reached on 5/4/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ELI MEKHLIN/
Examiner, Art Unit 1793

/J.A. LORENZO/
Supervisory Patent Examiner, Art
Unit 1793

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